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ABSTRACT

An inventory was administered to 161 college students in the late fall of 1977 in an attempt to predict the academic major of either psychology or special education students. The predictors were from the following series of items: demographic characteristics, academic information, occupational interests, and utility of their college program. A stepwise multiple regression was performed to determine which variables would maximally differentiate between the two groups. A major finding of the study was that although sex accounted for 10 percent of the variance of an academic major, it was not the only variable that could differentiate between the psychology and special education majors. Three variables (field of study for Ph.D., ability to do well in special education, and enjoyment of teaching elementary education) added more to the proportion of predictable variance than did sex. It is suggested that the data could lend itself to building a predictive model for the selection of an academic major. (SW)

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Predictors of a Major for Psychology and Special Education Students

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Predictors of a Major for Psychology and Special Education Students

Introduction

Much research has been conducted with students in general (Austin, 1965; Berdie, 1950, 1966; Crites, 1969; Feldman & Newcomb, 1973; and Holland, 1963, 1973), but there has been very little research conducted with psychology (Quereshi, Brennan, Kuchan, & Sackett, 1974) and special education (Jones & Gottfried, 1962; and Meisgeir, 1965) majors. The present writer considers this comparison to be important for a number of reasons. Psychology is becoming a very "popular" undergraduate major. It offers a valid foundation for a strong liberal arts education, a basis for personal fulfillment and self-understanding, a wide range of career options. However, many psychology majors come relatively late in their academic careers to the realization that the pursuit of a career in psychology, per se, entails rigorous and competitive advanced graduate work, in which they may, or may not, have interest, aptitude, or opportunity. They are often unaware (and/or sometimes unaccepting) of opportunities in other fields related to offering human services which their background offers them. Quereshi et al. (1974) reported in a study they conducted that a substantial number of students were either

misinformed or uniformed as to the occupational value of a bachelor's degree in psychology. Thus, it was indicated, that there is a definite need for a careful and thorough system of academic and occupational advisement.

Special education, particularly of the emotionally disturbed, the retarded, and the learning disabled, represents a field which offers opportunities to psychology majors to enter as allied fields; independent professional status without the pursuit of doctoral study; adequate financial recompense and a chance to use their undergraduate training in psychology to be of service to others.

The need for more research of special educators is also important for a number of reasons. Special education is a field in which extensive training is required to fully prepare students to become teachers, and this training involves much time and effort from the faculty and students. In order to use this time and effort effectively, potential students should be screened so that the most qualified students will be chosen. It would also be helpful to know the characteristics of successful teachers in special education. This is of importance because teachers of special education often remain on the job for approximately five years. If one is able to assess the characteristics of these teachers, one

could teach these characteristics to potential teachers so that they could have a lasting and productive career.

While the importance of these two groups is recognized, the underlying question is "Do other variables predict a significant amount of variance beyond that associated with sex for the selection of an academic major?" A preliminary analysis of the data in this study revealed that there was a radical difference in the distribution of the sex of the students of the two groups; in psychology there were 53.4% females and 46.6% males, and in special education there were 83.2% females and 16.8% males. Since the two groups differ in the percentage of males and females and since males and females are known to differ in many value orientations and motivations (Feldman & Newcomb, 1973), it may be that some of the findings associated with treating academic major as a dependent variable may reflect the affect of sex operating as an intervening variable. Because of this possibility it would be worthwhile to study the value orientation of special education and psychology majors and control for the sex of the subjects.

The importance of such a study has been expressed by Feldman and Newcomb (1973). They had found that students in a major field of study manifested characteristics that were similar to other students in that same field of study; however, it was not known

what proportion of these differences could be accounted for because of differences in student characteristics independent of sex differences.

Method

Subjects

The subjects in this study were Kent State University undergraduate majors in psychology and special education. The sample was drawn from several classes in psychology and special education for upperclassmen during the Fall of 1977. Fifty-severn psychology and 106 special education majors volunteered to complete the inventory during or after class. Students were not required to respond and no course credit, or other extrinsic motivation was employed. The data were gathered under the sufferance of the course instructors and subject to various stipulations as to the amount of class time which would be devoted to the task and who would administer the inventory. The response was anonymous and the students were assured confidentiality of all individual data would be maintained. While it was impossible to determine an exact response rate, it is estimated that about 75% of the eligible psychology majors and approximately 90% of the special education students responded to the inventory.

Instrumentation and Procedures

The inventory was developed by the writer and thesis advisor and refined upon the basis of two pilot studies conducted during Spring and Summer Quarters of 1977. The first pilot study was conducted in an individual interview format. The second pilot study was administered in small groups (of two--four people) while continuing the interview format. The analyses of the pilot studies facilitated the development of the final inventory.

The final form of the inventory was distributed and collected by the writer in upper-division psychology and special education classes.

The Inventory consisted of:

(a) 32 items eliciting demographic or academic information about the students;

(b) 24 Likert format items reflecting occupational interests (using a 4 point bi-polar scale plus No Opinion, the ratings were as follows: (4) Strongly Agree; (3) Agree; (2) Disagree; and (1) Strongly Disagree);

(c) 20 items reflecting interests in occupational functions (using a 5 point scale plus No Opinion, the ratings were as follows: (4) Very Much; (3) A Lot; (2) Somewhat; (1) Very Little; (0) Not At All);

(d) 18 items reflecting percepts of the utility of their college program to meet their needs (using a 6 point scale plus No Opinion, the ratings were as follows: (5) Invaluable; (4) Very Useful; (3) Useful; (2) Somewhat Useful; (1) Of Little Use; and (0) Not Useful).

Even though the inventory contained a large number of items (92), the extensive pilot work (particularly upon the development of the response alternatives), the No Opinion option, and the considerable redundancy of format made it possible for students to answer all items within 15 minutes.

Results

Two step-wise multiple regressions were performed to determine which variables would maximally differentiate between psychology and special education majors. Since sex was thought to be an intervening variable, it was the first variable to be entered into each equation. The order of inclusion of the remaining variables was determined by the respective contribution of each variable to the explained variance. The first regression equation consisted of demographic data, academic information, and occupational interests. The second regression equation consisted of interests in occupational functions, and items reflecting the percepts of the utility of their college program.

It was found that sex accounted for 10% of the variance for academic major. However, three variables (viz, field of study for Ph.D., ability to do well in Special Education, and enjoyment of teaching elementary education) added more to the proportion of predictable variance than did sex.

Inspection of Table 1 revealed that the selected field of study for a Ph.D. added 41%, and the ability to do well in Special Education added 13% to the proportion of predictable variance. The following items added 3%, 2%, and 2% respectively: number of brothers who attended college, grade point average in major field of study, and selected major field of study for a Master's degree.

Table 1

Summary of a Step-Wise Multiple Regression and Data Descriptive of Demographic Data, Academic Information, and Occupational Interests

Variable	R^2	Beta Weights	F
1. Sex	.11	-0.33	19.34
2. Selected Field of study for Ph.D.	.52	0.66	133.97

Table 1 (continued)

Variable	R^2	Beta Weights	F
3. Ability to do well in Special Education.	.65	-0.37	60.23
4. Number of brothers who attended college.	.68	-0.17	14.23
5. Selected field of study for a Master's degree.	.70	0.21	9.94
6. Grade point average in academic major.	.72	0.13	8.64

$p < .01 = 6.85$

Inspection of Table 2 revealed that sex accounted for 10% of the variance and enjoyment of teaching elementary education added 43% of the variance for academic major. Enjoyment in working with the mentally retarded and enjoyment in working with adults added 5% and 2% respectively to the proportion of predictable variance.

Table 2

Summary of a Step-Wise Multiple Regression

and Data Descriptive of Interests

in Occupational Functions

Variable	R^2	Beta Weights	F
1. Sex	.11	-0.33	19.34
2. Enjoyment in teaching Elementary Education.	.54	-0.66	149.06
3. Enjoyment in working with the mentally retarded.	.59	-0.25	16.72
4. Enjoyment in working with adults.	.61	0.15	9.19

$p < .01 = 6.85$

Discussion

A major finding of this study was that although sex accounted for 10% of the variance of an academic major, it was not the only variable that could differentiate between the psychology and special education majors. There were other variables that could predict a significant amount beyond that associated with sex.

Although there were variables that could differentiate between

the two groups, they shared many interests and goals. It was found that both groups were positive about their abilities to do well in the following fields: counseling, social work, experimental psychology, and teaching college. With regards to the utility of a college program, to increase the effectiveness of interpersonal relationships with others and humanitarian ideals were rated as being important for enhancing their goals. This is important to note because once the similarities have been revealed then the differentiating variables can be helpful in determining the appropriate academic major for a student.

This data could lend itself to building a predictive model for the selection of an academic major. This information could prove to be valuable to counselors and academic advisors, particularly with freshmen or undecided students, in order to facilitate the students' decision of an academic major.

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